

GENERIC NAME:

BRETYLIUM TOSYLATE

112.05

BRAND NAME: Bretylol

CLASS: antiarrhythmic

Mechanism of Action:

Elevates ventricular fibrillation threshold.

Biphasic autonomic (sympathetic) response: transient (15-20 minutes) adrenergic (sympathetic) response (increased heart rate, blood pressure, cardiac output, and possibly ventricular ectopy) due to norepinephrine release from nerve terminals; followed by a decrease in arterial pressure from vasodilation (due to norepinephrine depletion and reuptake blockade).

Decreases re-entry by decreasing refractory time imbalance between normal and infarcted tissue.

Prolongs action potential and refractory period.

Suppresses PVC's and ventricular arrhythmias 20 minutes to 2 hours after dosing.

Indications and Field Use:

Refractory VF/Pulseless VT, VT with pulses, wide complex tachycardia of unknown origin after other pharmacologic therapy (not first-line drug therapy).

Lidocaine (xylocaine) allergy.

Contraindications:

None, when used to treat life-threatening arrhythmias.

Adverse Reactions:

CV: Hypertension may occur initially due to catecholamine release; hypotension 15-20 minutes after administration (can usually be controlled with shock position, fluids and/or pressors as needed); increased sensitivity to catecholamines; angina or bradydysrhythmias.

GI: Nausea/vomiting after rapid IV administration.

NOTES ON ADMINISTRATION

Incompatibilities/Drug Interactions:

Pressor effects of dopamine and epinephrine are variable.

Adult Dosage:

VF/Pulseless VT, refractory to defibrillation/lidocaine: 5 mg/kg rapid IVP initial bolus followed by a flush with 20 ml NS; if needed may repeat at 10 mg/kg rapid IVP; thereafter repeat at 5-30 minute intervals until total dose of 35 mg/kg/day. If

GD-031-PHS-EMS: Drug Profile for Bretylium Tosylate

VF/Pulseless VT converts with bretylium, a constant infusion of 2 mg/min should be initiated.

Refractory VT in conscious patient with pulses: Initial dose 5 mg/kg diluted in 50-100 ml of NS given over 8-10 minutes. If VT remains refractory, a second bolus may be given at 5-10 mg/kg or a continuous infusion may be established at 2 mg/min. If bretylium converts VT, complete the loading dose and begin a continuous infusion at 1-2 mg/min.

Pediatric Dosage:

Same as adult (rarely given)

Routes of Administration:

IV bolus, followed by an IV infusion

Onset of Action:

5 minutes

Peak Effects:

45-60 minutes

Duration of Action:

5-10 hours

Dosage Forms/Packaging:

500 mg/10 ml ampules

Arizona Drug Box Supply Range:

PARAMEDIC and QUALIFIED IEMT:	1 - 3 ampules
INTERMEDIATE:	0

Special Notes:

- > Bretylium is not considered first-line therapy for VF or VT because it is no more effective than lidocaine and is more likely to produce adverse hemodynamic effects during CPR
- > In the non-cardiac arrest patient receiving bretylium transient hypertension may occur due to the initial stimulation of norepinephrine from adrenergic nerve terminals